Patent Claims:

1. A valve drive, especially for internal combustion engines of motor-powered devices, motor vehicles, or the like, having at least one cam element (2) disposed on a driven shaft (1) and having at least one lift valve (10) which is displaceable by the cam element (2) and has a valve stem (11), the cam element (2) being arranged rotatably within a flexible enclosing element (4) connected to one end of the valve stem (11), characterized in that that end of the valve stem (11) which is connected to the enclosing element (4) is guided in the direction of displacement of the valve (10).

2. The valve drive as claimed in claim 1, characterized in that a holder (12) is configured between the enclosing element (4) and the valve stem (11), which holder has sliding surfaces (65) which can be guided on cylinder-head-fixed guide surfaces (85).

3. The valve drive as claimed in claim 2, characterized in that the holder (12) projects over the cam element (2) in the axial direction of the shaft (1) and the sliding surfaces (65) are provided on the projecting region (61) of the holder (12).

4. The valve drive as claimed in claim 2, characterized in that the cam element (2) has two axially spaced cam regions and, between these, a groove (31) disposed in extension of the sliding surfaces (65) of the holder (12), the enclosing element (4), in the holding region (6) for the valve stem (11), having a slot (5) corresponding with the groove (31).

5. The valve drive as claimed in one of claims 2 to 4, characterized in that the holder (12) comprises a bearing sleeve (68) in the enclosing element (4) and a hinge pin (14) connected to the valve stem (11), which hinge pin is rotatably mounted in the bearing sleeve (68).

6. The valve drive as claimed in claim 5, characterized in that the hinge pin (14) is provided with a connecting part (18) connected to the valve stem (11).

7. The valve drive as claimed in claim 6, characterized in that the hinge pin (14) and the connecting part (18) have an L-shape.

8. The valve drive as claimed in claim 6, characterized in that the hinge pin (14) and the connecting part (18) have a T-shape, the connecting part (18) passing through the slot (5) present in the holding region (6) of the enclosing element (4) and being connected to the valve stem (11).

9. The valve drive as claimed in claim 3, characterized in that the valve stem (11) is offset in relation to the cam element (2) in the axial direction of the shaft (1).

10. The valve drive as claimed in one of claims 2 to 4, characterized in that the holder (12) has a hinge pin (14) disposed in the enclosing element (4) and an eye (78) disposed at the end of the valve stem (11) and through which the hinge pin (14) passes, the sliding surfaces (65) being configured on the valve stem (11).

11. The valve drive as claimed in one of claims 3 to 10, characterized in that the holder (12) has a bore (62), the axis of which lies in the axis of the valve stem (11).

12. The valve drive as claimed in claim 11, characterized in that the end of the valve stem (11) has a threaded bore and a fastening screw (63) passes through the bore (62) of the holder (12).

13. The valve drive as claimed in claim 12, characterized in that the shaft (1), in extension of the fastening screw (63), has a bore (30), through which the fastening screw (63) can be accessed.

14. The valve drive as claimed in claim 11, characterized in that the bore (62) of the holder (12) is a threaded bore, into which the end of the valve stem (11) is screwed.

15. The valve drive as claimed in claim 1 or 10, characterized in that on the valve stem (11) sliding surfaces (65) are provided, which extend up to that end of the valve stem (11) which is connected to the enclosing element (4) and which are guided on cylinder-head-fixed guide surfaces (85) extending in the direction of displacement of the valve (10).

16. The valve drive as claimed in one of claims 1 to 3, characterized in that the enclosing element (4) is assigned on both sides a holder (12) for a respective valve (10) guided at the upper end next to the cam element (2).

17. The valve drive as claimed in claim 2 or 3, characterized in that two valves (10) are provided between two cam elements (2), the two holders (12) having a common hinge pin (14) connected to the two enclosing elements (4).

18. The valve drive as claimed in one of claims 1 to 17, characterized in that the valve stem (11) is screwed into the valve disk (69) and/or into the connecting part (18).

19. The valve drive as claimed in one of claims 1 to 18, characterized in that the valve disk (69) extends obliquely to the valve stem (11).

20. The valve drive as claimed in one of claims 1 to 19, characterized in that the direction of displacement of the valve (10) deviates from the right angle to the rotation axis (8) of the shaft (1) and the valve stem (11) is arranged such that it is displaceable, relative to the cam element (2), parallel to the shaft (1).

21. The valve drive as claimed in one of claims 1 to 20, characterized in that the axis (71) of the valve stem (11) of

the parallel-running axial plane of the shaft (1) is laterally offset.

22. A cylinder head for a valve drive as claimed in one of claims 1 to 21, characterized in that it has a semicircular bearing recess (91) for the shaft (1) and a semicircular bearing recess (86) for each cam element (2), in the region of a bore (88) for the reception of the valve stem (11) guide surfaces (85) being provided for that end of the valve stem (11) which is connected to the enclosing element (4), which guide surfaces extend in the direction of displacement of the valve (10).

23. The cylinder head as claimed in claim 22, characterized in that the bore (88) opens laterally into the bearing recess (86) for the cam element (2).

24. The cylinder head as claimed in claim 23 for a valve drive as claimed in claim 16, characterized in that the cylinder head (80), between two bores (88) for two valve (10), has a slot (87) for the reception of a common hinge pin (14).

25. The cylinder head as claimed in claim 22, characterized in that the guide surfaces (85) are provided on guide webs, which are arranged erect in the bearing recess (86), the bore (88) running through the bearing recess (86).

26. The cylinder head for a valve drive as claimed in one of claims 1 to 21, characterized in that it has a base element (20) having a bearing web (21) for the shaft (1) and having a guide web (22) for the valve (10), which guide web is disposed in the region of the bore (88) for the reception of the valve stem (11), the guide web(22) being assigned guide surfaces (85) for that end of the valve stem (11) which is connected to the enclosing element (4).

27. The cylinder head as claimed in claim 25 or 26 for a valve drive as claimed in claim 4, characterized in that the

thickness of the guide webs (22) corresponds maximally to the width of the groove (31) in the cam element (2).

28. The cylinder head as claimed in one of claims 22 to 27, characterized in that into the bore (88) is inserted a guide sleeve (81), the upper end of which has a slot (82), the guide surfaces (85) in the guide sleeve (81) being provided above the height of the slot (82).

29. The cylinder head as claimed in claim 22 for a valve drive as claimed in claim 17, characterized in that two inlet or outlet ducts (89) respectively provided with a valve (10) are disposed between the two cam elements (2).